

ABSTRACT

A hydrocarbon sensor is formed with an electrolyte body having a first electrolyte surface with a reference electrode depending therefrom and a metal oxide electrode body contained within the electrolyte body and having a first electrode surface coplanar with the first electrolyte surface. The sensor was formed by forming a sintered metal-oxide electrode body and placing the metal-oxide electrode body within an electrolyte powder. The electrolyte powder with the metal-oxide electrode body was pressed to form a pressed electrolyte body containing the metal-oxide electrode body. The electrolyte was removed from an electrolyte surface above the metal-oxide electrode body to expose a metal-oxide electrode surface that is coplanar with the electrolyte surface. The electrolyte body and the metal-oxide electrode body were then sintered to form the hydrocarbon sensor.